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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,943	06/08/2005	Steven Van Es	2005_0753A	9694

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WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER	
BERNSHTEYN, MICHAEL	

ART UNIT	PAPER NUMBER
1713	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/533,943	VAN ES ET AL.	
	Examiner	Art Unit	
	Michael Bernshteyn	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-14,17-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 05/04/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "optionally" means "involving an option: not compulsory", and the term 'essentially" means "inherent, basic, indispensable" (www.onelook.com). Therefore, it is not clear, which monomers must be for the obtaining of the polymer, and which monomers are optional.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-10, 12-14 and 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerst et al. (U.S. Patent 5,254,985).

With regard to the limitation of instant claims 1-9, Gerst discloses that the aqueous polymer dispersion is composed of the monomers a) to d). The monomers a) comprise a mixture of at least one C_4 –alkyl acrylate and at least one C_6 – C_{12} –alkyl acrylate. The preferred C_4 –alkyl acrylate is **n-butyl acrylate**. Suitable examples of C_6 –

C_{12} –alkyl acrylate are **n-hexyl**, **2-ethylhexyl**, **octyl**, decyl or **dodecyl acrylate**. Preference is given to C_8 – alkyl acrylates, especially **2-ethylhexyl acrylate** (col. 2, lines 1-8). Monomers a) have a glass transition temperature of below 0^0C (col. 2, lines 18-19).

Examples of monomers b) are C_1 – C_{20} –alkyl (meth)acrylates, vinyl esters of carboxylic acids containing up to 20 carbon atoms, vinylaromatic compounds with up to 20 carbon atoms, ethylenically unsaturated nitriles, and vinylhalides, which have a glass transition temperature of above 0^0C (col. 2, lines 32-37). Particularly suitable alkyl (meth)acrylates are **methyl (meth)acrylate**, **methyl acrylate**, **n-butyl (meth)acrylate** and **tert-butyl (meth)acrylate**. Methyl acrylate, methyl (meth)acrylate and butyl (meth)acrylate are preferred (col. 3, lines 38-43). Examples of vinyl esters of C_1 – C_{20} carboxylic acids are vinyl laurate...and **vinyl acetate** (col. 2, lines 44-46). Suitable vinylaromatic compounds are α and p-**methylstyrene**, α-**butylstyrene**, 4-n-butylstyrene and, preferably, **styrene**. Examples of nitriles are acrylonitrile and **methacrylonitrile** (col. 2, lines 48-51). Vinyl halides are preferably **vinyl chloride** and vinilidene chloride. Preferred monomers b) are **methyl (meth)acrylate** and **styrene** (col. 2, lines 52-56).

Examples of monomers c) are ethylenically unsaturated monomers having carboxyl groups, such as **(meth)acrylic acid, maleic acid**, ethylenically unsaturated acid anhydrides or monoesters, such as **maleic anhydride** or **maleic** or **fumaric monoesters**. **Acrylic** and **methacrylic acid** are preferred (col. 2, lines 57-62).

Further ethylenically unsaturated monomers d) can be of any kind. Preferred

examples which may be mentioned are $C_1 - C_{10}$ –**hydroxyalkyl (meth)acrlates** or monomers listed under b) which have a glass transition temperature of less than 0^0C (col. 2, lines 64-67).

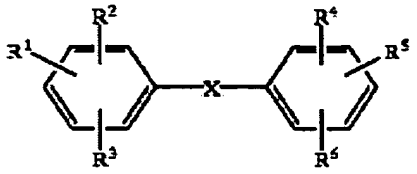
The polymer is composed of from 60 to 95% by weight of monomers a), from 5 to 30% by weight of monomers b), from 0 to 10% by weight of monomers c), and from 0 to 20% by weight of monomers d) (col. 1, lines 1-20).

With regard to the limitation of instant claim 10, Gerst discloses that **2-ethylhexyl acrylate, n-butyl acrylate, methyl (meth)acrylate** and **styrene** are preferred monomers to obtain the polymer. Ethyl acrylate is functional equivalent of butyl acrylate and they can be substituted with each other.

With regard to the limitation of instant claims 12-14, Gerst discloses that pressure-sensitive adhesives comprising an **aqueous polymer dispersion** wherein the polymer is composed of four groups of monomers and the polymer dispersion comprising an emulsifier consisting to the extent of at least 5% by weight of aromatic carbon atoms (and called aromatic emulsifier for short) or an **emulsifier mixture** consisting to the extent of at least 10% by weight of an aromatic emulsifier (abstract).

Preference is given to aromatic emulsifier having one or two, preferably two, sulfonate groups. The emulsifier particularly preferably comprises a compound of the formula (I), which is aromatic emulsifier. Compounds of the formula (I) normally also comprise a mixture of compounds having different degrees of substitutions (mono- or dialkylated) and different positions of the substituents (i.e. of the sulfonate groups and of the one or two alkyl groups). Compounds of the formula (I) are marketed under the

tradename Dowfax®2A1 by Dow Chemical Company (col. 3 line 49 through col. 4, line 9).



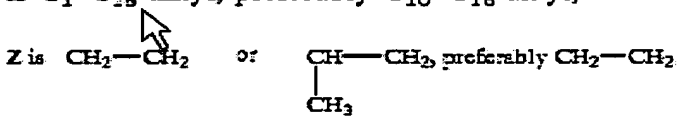
where X is O, S, CH_2, NH or NR^7, one or two of R^1 to R^6 are $SO_3^{\ominus}$ $K^{\oplus}$ and the others of R^1 to R^6 are H or C_1–C_{18}-alkyl, R^7 is C_1–C_{18}-alkyl and K is a countercation.
X is preferably O. Preferably, one or two of R^1 to R^5 are C_1–C_{18}-alkyl, especially C_6–C_{18}-alkyl, and the others of R^1 to R^6 are hydrogen atoms and the sulfonate groups.

Relative to use of an aromatic emulsifier alone, the use of a mixture comprising an aromatic emulsifier and an emulsifier without aromatic carbon atoms (nonaromatic emulsifier) is preferred (col. 4, lines 10-13).

The nonaromatic emulsifier (or aliphatic) is preferably of the formula (II):

II

where:
R^8 is C_1–C_{18}-alkyl, preferably C_{10}–C_{16}-alkyl,



n is an integer from 1 to 40, preferably from 2 to 30, and
K^+ is a cation, e.g. H^+, an alkali metal cation of e.g. Na or K, or ammonium.
Compounds of the formula II are intended to embrace compounds comprising both

Compounds of the formula (II) are marketed, for example, under the designation Desponil® FES by Henkel (col. 4, line 7 through col. 4, line 37).

With regard to the limitation of instant claims 17-21, Gerst discloses that examples of water-soluble initiators for the emulsion polymerization are ammonium salts and alkali metal salts of peroxodisulfuric acid, or organic peroxides. Particlar suitable is possessed by what are known as reduction/oxidation (redox) initiator systems (col. 4, lines 58-64). Regulators as well can be employed for the polymerization, and reduce the molecular mass. Examples of suitable compounds are those having a thiol group, such as **tert-butyl mercaptan, ethylhexyl thioglycolate, mercaptoethanol, mercaptopropyltrimethoxysilane** or **tert-dodecyl mercaptan** (col. 5, lines 30-35).

Gerst discloses that the emulsion polymerization can be conducted either as a batch process or in the form of a **feed process**, included staged or **gradient procedures**. Preference is given to the **feed process**, in which a portion of the polymerization mixture is introduced as initial charge, heated to the polymerization temperature and **initially** polymerized, and then the **reminder** of the polymerization mixture is supplied to the polymerization zone continuously, in stages or under a concentration **gradient** and normally by way of two or more spatially separate feed streams of which one or more comprise the monomers in pure or emulsified form, this supply taking place with the polymerization being maintained. The manner, in which the initiator is added to the polymerization vessel in the course of free-radical aqueous emulsion polymerization is known to the skilled worker. It can either be introduced

entirely in the initial charge to the polymerization vessel or else inserted continuously or in stages **at the rate** at which it is consumed in the course of free-radical aqueous emulsion polymerization. In each individual case it will depend in a manner known to the skilled worker both on the chemical nature of the initiator system and on the polymerization temperature. It is preferred to introduce one portion in the initial charge and to supply the **reminder** to the polymerization zone **at the rate** at which it is consumed (col. 5, lines 42-67).

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Gerst et al. in view of Bachon et al. (U.S. 6,964,986).

With regard to the limitation of instant claim 11, Gerst does not disclose the exact weight percentage of the monomers to obtain the polymer and the usage of ethyl imidazolidone methacrylate.

Bachon discloses that for aqueous adhesive system suitable comonomers are ethylenically unsaturated compounds containing N-functional groups. Such compounds unclude, for example, acrylamide, acrylonotrile,... ethyl imidazolidone methacrylate, etc.

Therefore all these compounds belong to the same class of ethylenically unsaturated compounds; they are functional equivalent and can be substituted with each other.

Therefore it would have been obvious to one having ordinary skills in the art at the time the invention was made to employ ethyl imidazolidone methacrylate as functional equivalent of acrylonitrile as taught by Bachon in Gerst's aqueous polymer

dispersion which is accessible to suspension or emulsion polymerization (US'986, col. 4, lines 19-20).

It is noted that the weight percentage of the monomers is a result effective variable, and therefore, it is within the skill of those skilled in the in the art to find the optimum value of a result effective variable, as per ***In re Boesch***, 617 F.2d 272, 205 USPQ 215 (CCPA 1980): Discovery of optimum value of a result effective variable in known process is ordinarily within the skill in the art and would have been obvious. See also ***In re Peterson***, 315 F.3d at 1330, 65 USPQ2d at 1382: "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-10 and 12-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-11 of copending Application No. 10/548,652. Although the conflicting claims are not identical, they are not patently distinct from each other because the described six groups of monomers of the instant Application are basically identical to the groups of monomers in the copending Application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claims 1-10 and 12-14 are directed to an invention not patentably distinct from claims 7-11 of commonly assigned 10/548,652. Specifically, the groups of monomers to obtain the polymer P described in the copending Application are basically identical to the groups of monomers in the instant Application.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302). Commonly assigned 10/533,943, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned

at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Conclusion

Other references used but not cited in this office action include U.S. Patents 6,254,985, 6,759,490, 6,667,378, 6,727,327, 6,248,826, 6,306,982, 5,969,069, 5,250,609, 5,326,814, 5,312,883, 6,423,805, 5,164,444, 5,143,954, 6,812,291, 5,205,861, 6,458,752, 6,462,013, 6,927,267, 4,145,511, 6,242,541, 4,204,023, 5,405,693, 6,964,986 and US 2001/0003765 are shown on the Notice of References Cited Form (PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn
Patent Examiner
Art Unit 1713

MB
11/16/2005

DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700